Internal
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State of Utah
DEPARTMENT OF NATURAL RESOURCES

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February 28, 2008

TO: Susan White, Mining Program Coordinator SMW

FROM: Beth Ericksen, Mining Engineer BE

Subject: Lisbon Valley Mining Co. Surety Reduction Request, M/037/088
Task #2206

Lisbon Valley Mining Company (LVMC) has submitted a request for a bond reduction of $563,132.00. Due to missing data, lack of identified assumptions and explanations, evaluative inconsistencies, and lack of transparency in the final bond estimate spreadsheet received by the Division on Feb. 6, 2008, the requested reduction is not recommended.

A general overview of the discrepancies/inconsistencies is outlined as follows:

- Bond calculations include missing or inconsistent acreage
- Spreadsheet numbers do not 'add up'
- No explanation of general or specific assumptions is provided
- No explanation of surety calculations is provided in the plan
- No approved bond scheme is provided in the plan

Due to the lack of demonstrative documentation, the dollar amount of the requested bond reduction cannot be verified. No explanation or outline documentation regarding the surety amount, surety details, or outline of surety plan has been found in the Notice of Intention. Important and necessary detail is lacking or missing in both the final bond estimate and in the current request for bond reduction.

It appears LVMC calculated a bond requirement based on an ultimate reclamation scenario as $10,172,230 in 2009 dollars. The existing surety with the Division is $6,076,888.00 *assumed* to be based on current reclamation obligation.

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Further emphasis substantiating the denial is structured in terms of a scenario. There are several other bond categories that are being ignored in this scenario, with this scenario directed toward the heap/rinse category only. It is determined that heap/rinse is the highest reclamation cost risk based largely on lack of information.

The scenario is outlined below:

The ultimate reclamation obligation is determined to be $10,722,230 based on information contained in the LVMC Final Bond Estimate spreadsheet. Due to an assumed bond scheme, the bond obligation is calculated at current reclamation obligation of $6,076,880.00 as determined by LVMC. According to the LVMC current estimate, there is $3,005,872.00 committed to heap/rinse work. This amount is 49% of the current reclamation obligation. Looking at the ultimate reclamation bond amount, the heap/rinse work obligation is 58% of the total ultimate surety. With full disturbance for each case, this percentage should be consistent.

Assigning 58% of the current reclamation obligation results in a heap/rinse amount of $3,524,595.00. This increase of $518,723.00 is less than the requested reduction amount but it is without consideration for unknowns and omissions.

Performing a range analysis using a 65th percentile, the dedicated bond for the LVMC current heap/rinse category should be $4,358,514.00. This scenario alone is enough to deny the request for the surety reduction because of the number of unknowns associated with the heap/rinse. These unknowns include: reclamation details, category specifics, and rinse duration, among others.

In the ultimate vs. current case, the difference does not exceed the reduction request amount, however, once increased risk due to uncertainties is conservatively assigned, the required amount increases substantially in just one reclamation category.

With all the unknowns and uncertainty revolving around the heap/rinse category, a conservative estimate that includes risk should be established. It is in the best interest of the Division to determine an element of risk associated with each of the surety categories. The presented example was for only one of the five main categories (there are sub-categories as well).

To reduce risk factors, resolve inconsistencies, and improve reclamation bond calculation transparency, it will be necessary for the LVMC to satisfactorily identify and explain the full basis and scope of the bond scheme. The bond scheme should be substantially documented in the NOI including identification of category make-up, general and detailed assumptions, and the surety estimate. The operator should be required to provide a much more comprehensive spreadsheet with supporting

documentation before any future bond reduction requests are considered by the Division.

Spreadsheets available if desired

2008 Interim Bond Estimate
Lisbon Valley Mining Co
La Sal, Utah

Summo USA Corporation- Lisbon Valley Copper Project. Updated to reflect anticipated 06 and 07 disturbance.

Based on *Details of Final Reclamation* original estimate prepared by The Winters Group 1997

ACTIVITY	AREA	QUANTITY	UNITS	$/Unit	1997 $ Cost	2004 $ Cost	2006 $ Cost	2007 $ Cost	2008 $ Cost	2009 $ Cost	Anticipated % Complete Feb 1 2008	Bond Requirement(in 2009 Dollars)
Waste Dump A- 190 acres												
area of top	456,444		SY									
area of slope	462,680		SY									
scarify top (flat) area		456,444	SY	0.20	$ 91,289	$ 109,108	$ 113,110	$ 114,309	$ 117,966	$ 121,741		
12 inches soil on top of dump		152,148	CY	1.25	$ 190,185	$ 227,308	$ 235,644	$ 238,142	$ 245,763	$ 253,627		
12 inches soil on slope		154,227	CY	1.25	$ 192,784	$ 230,415	$ 238,865	$ 241,397	$ 249,121	$ 257,093		
seed entire surface		190	acre	174	$ 33,060	$ 39,513	$ 40,962	$ 41,396	$ 42,721	$ 44,088		
Total-waste dump "A" reclamation					$ 507,318	$ 606,344	$ 628,581	$ 635,244	$ 655,572	$ 676,550	0%	0
Waste Dump B- 94 acres												
area of the top	197,222		SY									
area of the slope	258,240		SY									
scarify top (flat) area		197,222	SY	0.20	$ 39,444	$ 47,143	$ 48,872	$ 49,390	$ 50,971	$ 52,602		
12 inches soil on top of dump		65,741	CY	1.25	$ 82,176	$ 98,216	$ 101,818	$ 102,898	$ 106,190	$ 109,588		
12 inches soil on slope		86,080	CY	1.25	$ 107,600	$ 128,603	$ 133,319	$ 134,733	$ 139,044	$ 143,493		
seed entire surface		94	acre	174	$ 16,356	$ 19,549	$ 20,266	$ 20,480	$ 21,136	$ 21,812		
Total-waste dump "B" reclamation					$ 245,576	$ 293,511	$ 304,275	$ 307,501	$ 317,341	$ 327,496	40%	130,998
Waste Dump C- 120 acres												
area of the top	344,222		SY									
area of the slope	238,633		SY									
scarify top (flat) area		344,222	SY	0.20	$ 68,844	$ 82,282	$ 85,300	$ 86,204	$ 88,962	$ 91,809		
12 inches soil on top of dump		114,741	CY	1.25	$ 143,426	$ 171,422	$ 177,709	$ 179,592	$ 185,339	$ 191,270		
12 inches soil on slope		79,544	CY	1.25	$ 99,430	$ 118,838	$ 123,196	$ 124,502	$ 128,486	$ 132,598		
seed entire surface		120	acre	174	$ 20,880	$ 24,956	$ 25,871	$ 26,145	$ 26,982	$ 27,845		
Total-waste dump "C" reclamation					$ 332,580	$ 397,498	$ 412,076	$ 416,444	$ 429,770	$ 443,523	100%	443,523
Rinse Heap- 12%of total ore neutralized; rinsing & evaporation for 18 months												
lime (2.5 lbs/ton)x($0.025/lb)x(5.9M ton)		1,320,000	ton	0.063	$ 83,160	$ 99,392	$ 103,038	$ 104,130	$ 107,462	$ 110,901		
labor, power & pump for draindown & evaporation for 18 months		1	lot	99,926	$ 99,926	$ 119,431	$ 123,811	$ 125,124	$ 129,128	$ 133,260		
Subtotal for heap rinse & evaporation					$ 183,086	$ 218,824	$ 226,849	$ 229,253	$ 236,590	$ 244,160	100%	244,160
area of the top	578,976		SY									
area of the slope	81,719		SY									
12 inches clay cap on top	12	192,799	CY	2.50	$ 481,998	$ 576,081	$ 597,208	$ 603,538	$ 622,852	$ 642,783		
12 inches clay cap on slope	12	27,212	CY	2.50	$ 68,031	$ 81,310	$ 84,292	$ 85,186	$ 87,912	$ 90,725		
24 inch crushed rock on top	24	385,598	CY	2.50	$ 963,995	$ 1,152,162	$ 1,194,416	$ 1,207,077	$ 1,245,703	$ 1,285,566		
24 inch crushed rock on slope	24	54,425	CY	2.50	$ 136,062	$ 162,621	$ 168,585	$ 170,372	$ 175,824	$ 181,450		
12 inches soil on top	12	192,799	CY	1.25	$ 240,999	$ 288,041	$ 298,604	$ 301,769	$ 311,426	$ 321,391		
12 inches soil on slope	12	27,212	CY	1.25	$ 34,016	$ 40,655	$ 42,146	$ 42,593	$ 43,956	$ 45,362		
seed entire surface		178	acre	174	$ 30,972	$ 37,018	$ 38,375	$ 38,782	$ 40,023	$ 41,304		
Subtotal- clay, crushed rock, soil & seeding for leach pad					$ 1,956,072	$ 2,337,888	$ 2,423,627	$ 2,449,317	$ 2,527,695	$ 2,608,581	100%	2,608,581
Reclamation of Miscellaneous Areas												
Pond Area- 11 Acres												
raffinate pond- 12 inches soil		4,853	CY	1.25	$ 6,065	$ 7,249	$ 7,515	$ 7,594	$ 7,837	$ 8,088		
PLS pond- 12 inches soil		4,852	CY	1.25	$ 6,065	$ 7,249	$ 7,515	$ 7,594	$ 7,837	$ 8,088		
ILS pond- 12 inches soil		4,852	CY	1.25	$ 6,065	$ 7,436	$ 7,594	$ 7,837	$ 9,916	$ 10,452		
water runoff pond- 12 inches soil		8,229	CY	1.25	$ 10,286	$ 12,294	$ 12,745	$ 12,880	$ 13,292	$ 13,717		
seed 4 pond areas		14	acre	174	$ 2,436	$ 2,911	$ 3,018	$ 3,050	$ 3,148	$ 3,249		
Total-Pond Area reclamation					$ 30,917	$ 37,139	$ 38,387	$ 38,956	$ 42,031	$ 43,594	100%	43,594
Plant & Crusher Area- 25.5 Acres												
apply 12 inches soil		41,080	CY	1.25	$ 51,350	$ 61,373	$ 63,624	$ 64,298	$ 66,356	$ 68,479		
seed entire plant area		26	acre	174	$ 4,437	$ 5,303	$ 5,498	$ 5,556	$ 5,734	$ 5,917		
Total- Plant Area Reclamation					$ 55,787	$ 66,676	$ 69,122	$ 69,854	$ 72,090	$ 74,397	100%	74,397
Haul Roads- 40 Acres												
scarify		192,889	SY	0.20	$ 38,578	$ 46,108	$ 47,799	$ 48,306	$ 49,852	$ 51,447		
contour		64,296	CY	1.25	$ 80,370	$ 96,058	$ 99,581	$ 100,636	$ 103,857	$ 107,180		
apply 12 inches soil		67,511	CY	1.25	$ 84,389	$ 100,861	$ 104,560	$ 105,669	$ 109,050	$ 112,540		
seed entire area		40	acre	174	$ 6,960	$ 8,319	$ 8,624	$ 8,715	$ 8,994	$ 9,282		
Total- Plant Reclamation Area					$ 210,297	$ 251,346	$ 260,564	$ 263,326	$ 271,752	$ 280,448	100%	280,448
Power Line Corridor- 64 Acres												
*note the power company has requested the line remain open		64	acre	n/c	$ -							
Reseed Soil Stockpile Areas- 40 Acres												
reseed 40 acres		40	acre	174	$ 6,960	$ 8,319	$ 8,624	$ 8,715	$ 8,994	$ 9,282		
Total- Reseed Soil Stock Pile Areas					$ 6,960	$ 8,319	$ 8,624	$ 8,715	$ 8,994	$ 9,282	33%	3,063
Fences & Berms Around Open Pits												
fence around Sentinel Pit 1		5,620	LF	3.02	$ 16,972	$ 20,285	$ 21,029	$ 21,252	$ 21,932	$ 22,634		
fence around Sentinel Pit 2		2,140	LF	3.02	$ 6,463	$ 7,725	$ 8,008	$ 8,093	$ 8,352	$ 8,619		
fence around Centennial Pit		8,980	LF	3.02	$ 27,120	$ 32,414	$ 33,602	$ 33,959	$ 35,045	$ 36,167		
fence around GTO Pit		7,410	LF	3.02	$ 22,378	$ 26,746	$ 27,727	$ 28,021	$ 28,918	$ 29,843		
Total - Pit Fences					$ 72,933	$ 87,169	$ 90,366	$ 91,324	$ 94,246	$ 97,262	100%	97,262
Surface Drainage Diversion Ditches												
leach pad area		7,473	CY	1.25	$ 9,341	$ 11,164	$ 11,574	$ 11,696	$ 12,071	$ 12,457		
plant area		1,595	CY	1.25	$ 1,994	$ 2,383	$ 2,471	$ 2,497	$ 2,577	$ 2,659		
crusher area		1,810	CY	1.25	$ 2,263	$ 2,705	$ 2,804	$ 2,834	$ 2,924	$ 3,018		
dump areas		13,668	CY	1.25	$ 17,085	$ 20,420	$ 21,169	$ 21,393	$ 22,078	$ 22,784		
Total-Drainage Diversion Ditches					$ 30,683	$ 36,672	$ 38,017	$ 38,420	$ 39,649	$ 40,918	75%	30,689
Water Line												
12 inches soil on top		7,582	CY	1.25	$ 9,478	$ 11,328	$ 11,744	$ 11,868	$ 12,248	$ 12,640		
seed entire surface		4.7	acre	174	$ 818	$ 978	$ 1,014	$ 1,024	$ 1,057	$ 1,091		
Total-Drainage Diversion Ditches					$ 10,296	$ 12,306	$ 12,757	$ 12,892	$ 13,305	$ 13,731	100%	13,731
Drill Pads and Boreholes												
Centennial Recess Drilling		23	pads	350				8,050	$ 8,258	$ 8,689	100%	8,689
Other Miscellaneous Areas												50,000
Direct Costs												
Mobilization and Demobilization		1	lot	35,000	$ 35,000	$ 41,832	$ 43,366	$ 43,826	$ 45,228	$ 46,675		46,675
Leach Pad & Waste Dumps		combined total of previous items			$ 5,533,170	$ 6,613,219	$ 6,855,748	$ 6,928,419	$ 7,150,129	$ 7,378,933		3,427,263
Misc. Surface Areas		combined total of previous items			$ 400,990	$ 479,261	$ 496,838	$ 502,104	$ 518,171	$ 534,753		601,872
Total Direct Costs					$ 5,969,160	$ 7,134,312	$ 7,395,952	$ 7,474,349	$ 7,713,528	$ 7,960,361		4,075,810
Indirect Costs												
Plant Dismantling assumes no salvage value		1	lot	450,000	$ 450,000	$ 537,838	$ 557,562	$ 563,472	$ 581,504	$ 600,112		
Plugging monitoring wells												
5-wells, 500ft		2,500	lf	2.20	$ 5,500	$ 6,574	$ 6,815	$ 6,887	$ 7,107	$ 7,335		
6-wells 1,200ft		14,400	lf	3.30	$ 47,520	$ 56,796	$ 58,879	$ 59,503	$ 61,407	$ 63,372		
Engineering- 5% of total direct costs		1	lot	298,458	$ 298,458	$ 356,716	$ 369,798	$ 373,717	$ 385,676	$ 398,018		
Owners Cost- OMITTED												
Water Quality Monitoring for 11 wells		110	sample	500	$ 55,000	$ 65,736	$ 68,146	$ 68,869	$ 71,073	$ 73,347		
Revegetation monitoring for 5 years		5	year	5,000	$ 25,000	$ 29,880	$ 30,976	$ 31,304	$ 32,306	$ 33,340		
Construction management		1	lot	180,199	$ 180,199	$ 215,373	$ 223,271	$ 225,638	$ 232,859	$ 240,310		
Contingency (10% of Total Direct Costs)		1	lot	596,916	$ 596,916	$ 713,431	$ 739,595	$ 747,435	$ 771,353	$ 796,036		
						$ -	$ -	$ -	$ -	$ -		
Total Indirect Costs					$ 1,658,593	$ 1,982,342	$ 2,055,042	$ 2,076,825	$ 2,143,284	$ 2,211,869		1,132,506
Adjusted Total Costs 2.58%/yr					$ 7,627,753	$ 9,116,654	$ 9,450,994	$ 9,551,174	$ 9,856,812	$ 10,172,230		

	5,208,316	**5,208,316**
Existing Bond		6,076,888
08 Bond Release		868,572

Escalation Schedule (2.58%/)

0	$1.0000	
1998	$1.02580	
1999	$1.05227	
2000	$1.07941	
2001	$1.10726	
2002	$1.13583	
2003	$1.16513	
2004	$1.19520	
2005	$1.22603	
2006	$1.23903	(1.6% escalation)
2007	$1.25216	(1.6% escalation)
2008	$1.29223	
2009	$1.33358	
2010	$1.37626	
2011	$1.42030	

1.065024